

CURRICULUM VITAE

Ivan Vitev

Contact Information:

- Work address: Los Alamos National Laboratory, Group T-2, Mail Stop B283, Los Alamos, NM 87545
- E-mail: ivitev@lanl.gov, Phone #: (505)665-8066, Fax #: (505)665-1931

Education and Training:

A. Graduate

- September 1997 -August 2002: Columbia University, New York. GPA 4.17
- October 2002: Received Ph.D. in Theoretical Nuclear Physics, Columbia University, New York
- October 2000: Received M.Phil. in Physics, Columbia University, New York
- October 1999: Received M.A. in Physics, Columbia University, New York

B. Undergraduate

- October 1990 -November 1995: Sofia University "St. Kliment Ohridski", Sofia,Bulgaria. GPA 6.00 (out of 6.00)
- November 1995: Received M.S. in Theoretical Particle and Nuclear Physics, Sofia University, Sofia, Bulgaria
- November 1995: Received M.S. in Education(Physics), Sofia University, Sofia, Bulgaria
- July 1993: Received B.S.(major in Physics), Soa University, Sofia, Bulgaria

Research and Professional Experience:

A. Positions held

- July 2007-present: Staff Scientist, Theoretical Division, Group T-2 Nuclear and Particle Physics, Astrophysics and Cosmology, Los Alamos National Laboratory. Description: lead the theoretical nuclear physics effort in high-energy nuclear collisions
- July 2004- July 2007: J. Robert Oppenheimer Fellow (tenure track), Theoretical and Physics Divisions - Group T-16 Nuclear Theory and Group P-25 Subatomic Physics, Los Alamos National Laboratory. Description: develop novel theoretical and computational approaches to heavy ion physics

B. Postdoctoral research

- September 2002 -June 2004: Post Doctoral Research Associate, Theoretical Nuclear Physics group with Prof. J.P.Vary and Prof. J.W.Qiu,Iowa State University, Ames, IA

Selected Professional Awards and Memberships:

A. Awards

- American Physical Society (APS) Fellow, Division of Nuclear Physics, 2012
- Department of Energy Early Career Award, Nuclear Physics, 2012
- Presidential Early Career Award for Scientists and Engineers (PECASE), 2008
- J. Robert Oppenheimer Fellowship, 2004-2007
- Eureka Foundation Fellowship, 1997
- St. Cyril and St. Methodius International Foundation & Ministry of Education Recognition for Outstanding Academic Achievements, 1997-1998
- Sofia University Fellowship (top of the class), 1990-1995

B. Memberships

- 2001-Present: Member of the American Physical Society
- 1994-1995: Member of the Bulgarian Physical Society

Service:

A. Grant review

- Reviewer for the US Department of Energy, Nuclear Physics, 2006 - present
- Reviewer for the National Science Foundation, Nuclear Physics, 2009 - present

B. Pier review

- Referee for Physical Review Letters - published by the American Physical Society
- Referee for Physical Review C - published by the American Physical Society
- Referee for Physics Letters B - published by Elsevier Physics
- Referee for Nuclear Physics A - published by Elsevier Physics
- Referee for European Physical Journal C - published by Springer-Verlag
- Referee for European Physical Journal A - published by Springer-Verlag
- Referee for Journal of Physics G - published by Institute of Physics
- Referee for Acta Physica Hungarica A - published by Akademiai Kiad
- Referee for Modern Physics Letters A - published by World Scientific
- Referee for International Journal of Modern Physics E - published by World Scientific

C. Conference organization

- Co-organizer, chair, of the 2012 National Nuclear Physics Summer School, 2012
- Co-organizer of the QCD and the Quark-gluon plasma at the APS/DNP, 2010
- Co-convenor of the ISMD Jets session, 2006
- International Advisory Committee of CINPP, 2005
- Local Organizing Committee of the Muon Workshop, 2005
- Co-organizer of LHC workshop at PANIC, 2005

D. Institutional service

- Laboratory Staff Search Committee 2006 - 2007, 2011

- Laboratory Directed Research and Development (LDRD) Review Committee 2009-2011, 2013

Lectures, colloquia and outreach:

- JET Collaboration summer school (4-lecture series) 2010, Southern Methodist University (2-lecture series) 2005, Quark Matter student lecture 2005, Jyvaskyla nuclear physics school (6 lecture series) 2004
- Colloquia: Bulgarian Academy of Sciences, Rutgers University, Iowa State University, Los Alamos National Laboratory (2), University of Utah
- Hosting graduate and undergraduate students: Philip Saad (undergraduate, UC Santa Barbara), Robin Lashof (undergraduate, UC Santa Barbara), Michael Fickinger (graduate, U Arizona, Tucson), Hongxi Xing (graduate, CCNU), Simon Wicks (graduate, Columbia U), Azfar Adil (graduate, Columbia U)
- Stewardship Magazine 2013 interview article on heavy ion physics and strongly interacting plasmas.

Publication List:

Summary of research record: 81 manuscripts, including 23 Letters; 4400+ citations, including 5 TOPCITE 250+, 8 TOPCITE 100+, and 11 TOPCITE 50+ works

A. Publications

1. **“b-tagged jet production in heavy ion reactions at the LHC”**
J. Huang, Z. Kang and I. Vitev
Submitted to Phys. Lett. B
2. **“Angular distributions of higher order splitting functions in the vacuum and in dense QCD matter”**
M. Fickinger, G. Ovanessian and I. Vitev.
arXiv:1304.3497 [hep-ph]
3. **“Predictions for $p+\text{Pb}$ Collisions at $\sqrt{s_{NN}} = 5 \text{ TeV}$ ”**
J. L. Albacete, N. Armesto, R. Baier, G. G. Barnafoldi, J. Barrette, S. De, W. -T. Deng and A. Dumitru *et al.*
arXiv:1301.3395 [hep-ph]
Int. J. Mod. Phys. E Vol. **22**, 1330007 (2013)
4. **“Transverse momentum-weighted Sivvers asymmetry in semi-inclusive deep inelastic scattering at next-to-leading order”**
Z. -B. Kang, I. Vitev and H. Xing.
arXiv:1212.1221 [hep-ph]
10.1103/PhysRevD.87.034024
Phys. Rev. D **87**, 034024 (2013)

5. **“Nuclear modification of high transverse momentum particle production in p+A collisions at RHIC and LHC”**
 Z. -B. Kang, I. Vitev and H. Xing.
 arXiv:1209.6030 [hep-ph]
 10.1016/j.physletb.2012.10.046
 Phys. Lett. B **718**, 482 (2012)

6. **“Momentum imbalance of isolated photon-tagged jet production at RHIC and LHC”**
 W. Dai, I. Vitev and B. -W. Zhang.
 arXiv:1207.5177 [hep-ph]
 10.1103/PhysRevLett.110.142001
 Phys. Rev. Lett. 110, **142001** (2013)

7. **“Transverse momentum imbalance of back-to-back particle production in p+A and e+A collisions”**
 H. Xing, Z. -B. Kang, I. Vitev and E. Wang.
 arXiv:1206.1826 [hep-ph]
 10.1103/PhysRevD.86.094010
 Phys. Rev. D **86**, 094010 (2012)

8. **“High transverse momentum quarkonium production and dissociation in heavy ion collisions”**
 R. Sharma and I. Vitev.
 arXiv:1203.0329 [hep-ph]
 10.1103/PhysRevC.87.044905
 Phys. Rev. C 87, **044905** (2013)

9. **“The Z^0 -tagged jet event asymmetry in heavy-ion collisions at the CERN Large Hadron Collider”**
 R. B. Neufeld and I. Vitev.
 arXiv:1202.5556 [hep-ph]
 10.1103/PhysRevLett.108.242001
 Phys. Rev. Lett. **108**, 242001 (2012)

10. **“Dihadron momentum imbalance and correlations in d+Au collisions”**
 Z. -B. Kang, I. Vitev and H. Xing.
 arXiv:1112.6021 [hep-ph]
 10.1103/PhysRevD.85.054024
 Phys. Rev. D **85**, 054024 (2012)

11. **“Medium-induced parton splitting kernels from Soft Collinear Effective Theory with Glauber gluons”**
 G. Ovanessian and I. Vitev.
 arXiv:1109.5619 [hep-ph]
 10.1016/j.physletb.2011.11.040
 Phys. Lett. B **706**, 371 (2012)

12. **“NLO analysis of inclusive jet, tagged jet and di-jet production in Pb+Pb collisions at the LHC”**
 I. Vitev.
 arXiv:1107.5741 [hep-ph]
 10.1088/0954-3899/38/12/124087
 J. Phys. G **38**, 124087 (2011)
13. **“Photon-tagged heavy meson production in high energy nuclear collisions”**
 Z. -B. Kang and I. Vitev.
 arXiv:1106.1493 [hep-ph]
 10.1103/PhysRevD.84.014034
 Phys. Rev. D **84**, 014034 (2011)
14. **“ $\mathcal{O}(\alpha_s^3)$ Analysis of Inclusive Jet and di-Jet Production in Heavy Ion Reactions at the Large Hadron Collider”**
 Y. He, I. Vitev and B. -W. Zhang.
 arXiv:1105.2566 [hep-ph]
 10.1016/j.physletb.2012.05.054
 Phys. Lett. B **713**, 224 (2012)
15. **“Parton showers as sources of energy-momentum deposition in the QGP and their implication for shockwave formation at RHIC and at the LHC”**
 R. B. Neufeld and I. Vitev.
 arXiv:1105.2067 [hep-ph]
 10.1103/PhysRevC.86.024905
 Phys. Rev. C **86**, 024905 (2012)
16. **“An effective theory for jet propagation in dense QCD matter: jet broadening and medium-induced bremsstrahlung”**
 G. Ovanessian and I. Vitev.
 arXiv:1103.1074 [hep-ph]
 10.1007/JHEP06(2011)080
 JHEP **1106**, 080 (2011)
17. **“A possible determination of the quark radiation length in cold nuclear matter”**
 R. B. Neufeld, I. Vitev and B. -W. Zhang.
 arXiv:1010.3708 [hep-ph]
 10.1016/j.physletb.2011.09.045
 Phys. Lett. B **704**, 590 (2011)
18. **“The Physics of Z^0/γ^* -tagged jets at the LHC”**
 R. B. Neufeld, I. Vitev and B. -W. Zhang.
 arXiv:1006.2389 [hep-ph]
 10.1103/PhysRevC.83.034902
 Phys. Rev. C **83**, 034902 (2011)

19. **“Jet tomography of high-energy nucleus-nucleus collisions at next-to-leading order”**
I. Vitev and B. -W. Zhang.
arXiv:0910.1090 [hep-ph]
10.1103/PhysRevLett.104.132001
Phys. Rev. Lett. **104**, 132001 (2010)
20. **“Light-cone wave function approach to open heavy flavor dynamics in QCD matter”**
R. Sharma, I. Vitev and B. -W. Zhang.
arXiv:0904.0032 [hep-ph]
10.1103/PhysRevC.80.054902
Phys. Rev. C **80**, 054902 (2009)
21. **“Direct photon production in d+A and A+A collisions at RHIC”**
B. W. Zhang and I. Vitev
Mod. Phys. Lett. A **24**, 2649 (2009) [arXiv:0810.3194 [nucl-th]]
22. **“A Theory of jet shapes and cross sections: From hadrons to nuclei”**
I. Vitev, S. Wicks and B. W. Zhang
JHEP **0811**, 093 (2008) [arXiv:0810.2807 [hep-ph]]
23. **“Formation and decay of hadronic resonances in the QGP”**
C. Markert, R. Bellwied and I. Vitev
Phys. Lett. B **669**, 92 (2008) [arXiv:0807.1509 [nucl-th]]
24. **“A Systematic study of direct photon production in heavy ion collisions”**
I. Vitev and B. W. Zhang
Phys. Lett. B **669**, 337 (2008) [arXiv:0804.3805 [hep-ph]]
25. **“Non-Abelian energy loss in cold nuclear matter”**
I. Vitev
Phys. Rev. C **75**, 064906 (2007) [arXiv:hep-ph/0703002]
26. **“Collisional dissociation of heavy mesons in dense QCD matter”**
A. Adil and I. Vitev
Phys. Lett. B **649**, 139 (2007) [arXiv:hep-ph/0611109]
27. **“Open charm tomography of cold nuclear matter”**
I. Vitev, J. T. Goldman, M. B. Johnson and J. W. Qiu
Phys. Rev. D **74**, 054010 (2006) [arXiv:hep-ph/0605200]
28. **“Testing the mechanism of QGP-induced energy loss”**
I. Vitev
Phys. Lett. B **639**, 38 (2006) [arXiv:hep-ph/0603010]
29. **“Large angle hadron correlations from medium-induced gluon radiation”**
I. Vitev
Phys. Lett. B **630**, 78 (2005) [arXiv:hep-ph/0501255]

30. **“Hadron production from quark coalescence and jet fragmentation in intermediate energy collisions at RHIC”**
V. Greco, C. M. Ko and I. Vitev
Phys. Rev. C **71**, 041901 (2005) [arXiv:nucl-th/0412043]
31. **“Coherent QCD multiple scattering in proton-nucleus collisions”**
J. w. Qiu and I. Vitev
Phys. Lett. B **632**, 507 (2006) [arXiv:hep-ph/0405068]
32. **“Jet quenching at intermediate RHIC energies”**
I. Vitev
Phys. Lett. B **606**, 303 (2005) [arXiv:nucl-th/0404052]
33. **“Nuclear shadowing in neutrino nucleus deeply inelastic scattering”**
J. W. Qiu and I. Vitev
Phys. Lett. B **587**, 52 (2004) [arXiv:hep-ph/0401062]
34. **“Resummed QCD power corrections to nuclear shadowing”**
J. w. Qiu and I. Vitev
Phys. Rev. Lett. **93**, 262301 (2004) [arXiv:hep-ph/0309094]
35. **“Transverse momentum diffusion and broadening of the back-to-back di-hadron correlation function”**
J. w. Qiu and I. Vitev
Phys. Lett. B **570**, 161 (2003) [arXiv:nucl-th/0306039]
36. **“Initial state parton broadening and energy loss probed in d + Au at RHIC”**
I. Vitev
Phys. Lett. B **562**, 36 (2003) [arXiv:nucl-th/0302002]
37. **“High p_T tomography of d + Au and Au+Au at SPS, RHIC, and LHC”**
I. Vitev and M. Gyulassy
Phys. Rev. Lett. **89**, 252301 (2002) [arXiv:hep-ph/0209161]
38. **“Reaction operator approach to multiple elastic scatterings”**
M. Gyulassy, P. Levai and I. Vitev
Phys. Rev. D **66**, 014005 (2002) [arXiv:nucl-th/0201078]
39. **“Jet tomography of Au+Au reactions including multigluon fluctuations”**
M. Gyulassy, P. Levai and I. Vitev
Phys. Lett. B **538**, 282 (2002) [arXiv:nucl-th/0112071]
40. **“Transverse expansion and high p(T) azimuthal asymmetry at RHIC”**
M. Gyulassy, I. Vitev, X. N. Wang and P. Huovinen
Phys. Lett. B **526**, 301 (2002) [arXiv:nucl-th/0109063]
41. **“Jet quenching and the anti-p greater than or equal to pi- anomaly at RHIC”**

- I. Vitev and M. Gyulassy
Phys. Rev. C **65**, 041902 (2002) [arXiv:nucl-th/0104066]
42. **“High $p(T)$ azimuthal asymmetry in noncentral A+A at RHIC”**
M. Gyulassy, I. Vitev and X. N. Wang
Phys. Rev. Lett. **86**, 2537 (2001) [arXiv:nucl-th/0012092]
 43. **“A Model of the electroweak interactions with invisible Higgs particle”**
I. Vitev and V. Rizov
Bulg. J. Phys. **28**, 15 (2001) [arXiv:hep-ph/0009253]
 44. **“Reaction operator approach to non-Abelian energy loss”**
M. Gyulassy, P. Levai and I. Vitev
Nucl. Phys. B **594**, 371 (2001) [arXiv:nucl-th/0006010]
 45. **“Non-Abelian energy loss at finite opacity”**
M. Gyulassy, P. Levai and I. Vitev
Phys. Rev. Lett. **85**, 5535 (2000) [arXiv:nucl-th/0005032]
 46. **“Jet quenching in thin quark gluon plasmas. 1. Formalism”**
M. Gyulassy, P. Levai and I. Vitev
Nucl. Phys. B **571**, 197 (2000) [arXiv:hep-ph/9907461]

B. Refereed conference proceedings

1. **“Formation time of hadronic resonances”**
I. Vitev.
10.1051/epjconf/20123600018
EPJ Web Conf. **36**, 00018 (2012).
2. **“Results on high transverse momentum quarkonium production and dissociation in heavy ion collisions”**
I. Vitev.
10.1088/1742-6596/389/1/012029
J. Phys. Conf. Ser. **389**, 012029 (2012).
3. **“Electroweak boson-tagged jet event asymmetries at the Large Hadron Collider”**
I. Vitev.
arXiv:1210.1264 [hep-ph]
4. **“Probing nuclear matter with jets”**
B. -W. Zhang, Y. He, R. B. Neufeld, I. Vitev and E. Wang.
arXiv:1207.6558 [nucl-th]
5. **“A brief overview of fixed-order perturbative QCD calculations of jet production in heavy-ion collisions”**
I. Vitev.

arXiv:1010.5803 [hep-ph]
10.1143/PTPS.187.68
Prog. Theor. Phys. Suppl. **187**, 68 (2011)

6. **“The Theory and phenomenology of jets in nuclear collisions”**
I. Vitev, B. W. Zhang and S. Wicks
Eur. Phys. J. C **62**, 139 (2009) [arXiv:0810.3052 [hep-ph]]
To appear in the proceedings of Hot Quarks 2008: Workshop for Young Scientists on the Physics of Ultrarelativistic Nucleus-Nucleus Collisions, Estes Park, Colorado, 18-23 Aug 2008
7. **“Heavy Ion Collisions at the LHC - Last Call for Predictions”**
N. Armesto *et al.*
J. Phys. G **35**, 054001 (2008) [arXiv:0711.0974 [hep-ph]]
Presented at Workshop on Heavy Ion Collisions at the LHC: Last Call for Predictions, Geneva, Switzerland, 14 May - 8 Jun 2007
8. **“Theoretical developments in heavy and light flavor energy loss”**
I. Vitev
J. Phys. G **35**, 104011 (2008) [arXiv:0806.0003 [hep-ph]]
Plenary talk at Quark Matter 2008: 20th International Conference on Ultra-Relativistic Nucleus Nucleus Collisions (QM 2008), Jaipur, India, 4-10 Feb 2008
9. **“Open charm tomography of cold and hot nuclear matter”**
I. Vitev
Braz. J. Phys. **37**, 736 (2007)
Prepared for 36th International Symposium on Multiparticle Dynamics (ISMD 2006), Rio de Janeiro, Brazil, 2-8 Sep 2006
10. **“Testing the mechanism of QGP-induced energy loss”**
I. Vitev
Acta Phys. Hung. A **27**, 281 (2006) [arXiv:hep-ph/0511237]
Prepared for 18th International Conference on Ultrarelativistic Nucleus-Nucleus Collisions: Quark Matter 2005 (QM 2005), Budapest, Hungary, 4-9 Aug 2005
11. **“Novel heavy flavor suppression mechanisms in the QGP”**
I. Vitev, A. Adil and H. van Hees
J. Phys. G **34**, S769 (2007) [arXiv:hep-ph/0701188]
Contributed to 19th International Conference on Ultra-Relativistic Nucleus-Nucleus Collisions: Quark Matter 2006 (QM2006), Shanghai, China, 14-20 Nov 2006
12. **“Recent PQCD calculations of heavy quark production”**
I. Vitev
J. Phys. G **32**, S317 (2006) [arXiv:hep-ph/0605334]
Invited talk at International Conference on Strangeness in Quark Matter (SQM2006), Los Angeles, California, 26-31 Mar 2006

13. **“Nuclear effects on open charm production in p+A reactions”**
 I. Vitev, J. T. Goldman, M. Johnson and J. W. Qiu
 Acta Phys. Hung. A **27**, 275 (2006) [arXiv:hep-ph/0511220]
To appear in the proceedings of 18th International Conference on Ultrarelativistic Nucleus-Nucleus Collisions: Quark Matter 2005 (QM 2005), Budapest, Hungary, 4-9 Aug 2005
14. **“Large angle hadron correlations from medium-induced gluon radiation”**
 I. Vitev
 J. Phys. Conf. Ser. **27**, 11 (2005) [arXiv:hep-ph/0506281]
To appear in the proceedings of MIT Workshop on Correlations and Fluctuations in Relativistic Nuclear Collisions, Cambridge, Massachusetts, 21-23 Apr 2005
15. **“Coherent power corrections to structure functions”**
 I. Vitev
 AIP Conf. Proc. **792**, 274 (2005) [arXiv:hep-ph/0506039]
Presented at 13th International Workshop on Deep Inelastic Scattering (DIS 05), Madison, Wisconsin, 27 Apr - 1 May 2005
16. **“Jet quenching in relativistic heavy ion collisions”**
 I. Vitev
 J. Phys. Conf. Ser. **50**, 119 (2006) [arXiv:hep-ph/0503221]
Invited plenary talk at 5th International Conference on Physics and Astrophysics of Quark Gluon Plasma (ICPAQGP 2005), Salt Lake City, Kolkata, India, 8-12 Feb 2005
17. **“Probing the phases of QCD in ultra-relativistic nuclear collisions”**
 I. Vitev
 Int. J. Mod. Phys. A **20**, 3777 (2005) [arXiv:hep-ph/0411330]
To appear in the proceedings of DPF 2004: Annual Meeting of the Division of Particles and Fields (DPF) of the American Physical Society (APS), Riverside, California, 26-31 Aug 2004
18. **“Jets in nuclear collisions”**
 I. Vitev
 Acta Phys. Polon. B **36**, 461 (2005) [arXiv:hep-ph/0410045]
To appear in the proceedings of 34th International Symposium on Multiparticle Dynamics (ISMD 2004), Rohnert Park, California, 26 Jul - 1 Aug 2004
19. **“The Perturbative QCD factorization approach in high energy nuclear collisions”**
 I. Vitev
 J. Phys. G **31**, S557 (2005) [arXiv:hep-ph/0409297]
To appear in the proceedings of Hot Quarks 2004: Workshop for Young Scientists on the Physics of Ultrarelativistic Nucleus-Nucleus Collisions (HQ’04), Taos Valley, New Mexico, 18-24 Jul 2004
20. **“Jet tomography”**
 I. Vitev

J. Phys. G **30**, S791 (2004) [arXiv:hep-ph/0403089]

Plenary talk given at 17th International Conference on Ultra Relativistic Nucleus-Nucleus Collisions (Quark Matter 2004), Oakland, California, 11-17 Jan 2004

21. **“Multiparton tomography of hot and cold nuclear matter”**

I. Vitev

AIP Conf. Proc. **698**, 721 (2004) [arXiv:nucl-th/0308028]

To appear in the proceedings of 8th Conference on the Intersections of Particle and Nuclear Physics (CIPANP 2003), New York, New York, 19-24 May 2003

22. **“High $p(T)$ pion quenching versus anti + baryon enhancement in nucleus nucleus collisions”**

I. Vitev and M. Gyulassy

Nucl. Phys. A **715**, 779 (2003) [arXiv:hep-ph/0208108]

To appear in the proceedings of 16th International Conference on Ultrarelativistic Nucleus-Nucleus Collisions, Quark Matter 2002 (QM 2002), Nantes, France, 18-24 Jul 2002

23. **“Jet energy loss in hot and dense matter”**

I. Vitev, M. Gyulassy and P. Levai

Heavy Ion Phys. **17**, 237 (2003) [arXiv:nucl-th/0204019]

Submitted to International Workshop on Quark and Hadron Dynamics in Relativistic Heavy Ion Collisions (BP 2002), Budapest, Hungary, 3-7 Mar 2002

24. **“Discovery of jet quenching at RHIC and the opacity of the produced gluon plasma”**

P. Levai, G. Papp, G. I. Fai, M. Gyulassy, G. G. Barnafoldi, I. Vitev and Y. Zhang

Nucl. Phys. A **698**, 631 (2002) [arXiv:nucl-th/0104035]

Talk given at 15th International Conference on Ultrarelativistic Nucleus-Nucleus Collisions (QM2001), Stony Brook, New York, 15-20 Jan 2001

25. **“Last call for RHIC predictions”**

S. A. Bass *et al.*

Nucl. Phys. A **661**, 205 (1999) [arXiv:nucl-th/9907090]

To be published in the proceedings of 14th International Conference on Ultrarelativistic Nucleus-Nucleus Collisions (QM 99), Torino, Italy, 10-15 May 1999

26. **“Jet quenching in thin plasmas”**

M. Gyulassy, P. Levai and I. Vitev

Nucl. Phys. A **661**, 637 (1999) [arXiv:hep-ph/9907343]

To be published in the proceedings of 14th International Conference on Ultrarelativistic Nucleus-Nucleus Collisions (QM 99), Torino, Italy, 10-15 May 1999

C. Book chapters, white papers and contributions

1. **“PQCD approach to parton propagation in matter”**

I. Vitev

arXiv:hep-ph/0609156

Plenary talk at 2nd International Conference on Hard and Electromagnetic Probes of High-Energy Nuclear Collisions (Hard Probes 2006), Asilomar, Pacific Grove, California, 9-16 Jun 2006

2. **“Coherent multiple scattering and dihadron correlations in heavy ion collisions”**
J. W. Qiu and I. Vitev
arXiv:hep-ph/0410218
To appear in the proceedings of 32nd International Conference on High-Energy Physics (ICHEP 04), Beijing, China, 16-22 Aug 2004
3. **“Hard probes in heavy ion collisions at the LHC: Jet physics”**
A. Accardi *et al.*
arXiv:hep-ph/0310274
CERN-2004-009-B(2004)
4. **“Multiple parton interactions in dense QCD matter via the reaction operator approach”**
I. M. Vitev
UMI-30-66919()
5. **“Jet quenching and radiative energy loss in dense nuclear matter”**
M. Gyulassy, I. Vitev, X. N. Wang and B. W. Zhang
arXiv:nucl-th/0302077
*In *Hwa, R.C. (ed.) et al.: Quark gluon plasma* 123-191*
6. **“Leading order pQCD hadron production and nuclear modification factors at RHIC and the LHC”**
I. Vitev
arXiv:hep-ph/0212109
7. **“Jet quenching and high p(T) azimuthal asymmetry”**
I. P. Lokhtin, A. M. Snigirev and I. Vitev
arXiv:hep-ph/0212061
8. **“Probing hot dense matter with jet energy loss”**
P. Levai, G. G. Barnafoldi, G. Papp, M. Gyulassy, I. Vitev, G. I. Fai and Y. Zhang
Prepared for 30th International Workshop on Gross Properties of Nuclei and Nuclear Excitation: Hirschegg 2002: Ultrarelativistic Heavy Ion Collisions, Hirschegg, Austria, 13-19 Jan 2002
9. **“Jet quenching as a probe of gluon plasma formation”**
G. I. Fai, G. G. Barnafoldi, M. Gyulassy, P. Levai, G. Papp, I. Vitev and Y. Zhang
arXiv:hep-ph/0111211
Presented at International Europhysics Conference on High-Energy Physics (HEP 2001), Budapest, Hungary, 12-18 Jul 2001

10. **“Jet quenching at finite opacity and its application at RHIC energy”**
P. Levai, M. Gyulassy, I. Vitev, G. G. Barnafoldi, G. Papp, G. I. Fai and Y. Zhang
*Prepared for 30th International Symposium on Multiparticle Dynamics (ISMD 2000),
Tihany, Lake Balaton, Hungary, 9-15 Oct 2000*
11. **“The role of jet quenching in the anti-p greater than or equal to pi- anomaly at RHIC”**
I. Vitev, M. Gyulassy and P. Levai
arXiv:hep-ph/0109198
*To appear in the proceedings of International Europhysics Conference on High-Energy
Physics (HEP 2001), Budapest, Hungary, 12-18 Jul 2001*
12. **“Anomalous anti-proton to negative pion ratio as revealed by jet quenching at RHIC”**
I. Vitev and M. Gyulassy
arXiv:hep-ph/0108045
*To appear in the proceedings of International Nuclear Physics Conference (INPC 2001):
Nuclear Physics and the 21st Century, Berkeley, California, 30 Jul - 3 Aug 2001*
13. **“Jet quenching by brute force pQCD”**
M. Gyulassy, P. Levai and I. Vitev
*Prepared for International Europhysics Conference on High-Energy Physics (EPS-HEP
99), Tampere, Finland, 15-21 Jul 1999*
14. **“A Note on the gauge group of the electroweak interactions”**
V. Rizov and I. Vitev
arXiv:hep-ph/0009169
CU-TP-984(2000)

Talks, Presentations and Posters:

Summary of presentation record: 140+ lectures, colloquia, invited and contributed talks, seminars and posters

A. Lectures and colloquia

1. The little bang: and overview of heavy ion physics in the RHIC and LHC era, I. Vitev, Departmental colloquium, University of Utah Salt Lake City, UT, December 2011.
2. I. Vitev, “Opacity expansion approach to parton energy loss”, Series of four lectures at the JET Collaboration Summer School, June 2010, Berkeley, CA
3. I. Vitev, “Heavy Ion Physics”, T-2 Colloquium Series, October 2008, Los Alamos, NM
4. I. Vitev, Recent developments in the theory and phenomenology of heavy ion collisions
Invited lecture, February 2008, Bulgarian Academy of Sciences, Soa, Bulgaria
5. I. Vitev, “Parton energy loss in dense nuclear matter”, Series of two graduate student lectures at the Southern Methodist University, November 2005, Dallas, TX

6. I. Vitev, "Jets in the nuclear environment", Student lecture at the Quark Matter 2005 international conference, August 2005, Budapest, Hungary
7. I. Vitev, "The Little Bang", Departmental colloquium, February 2005, Iowa State University, Ames, IA
8. I. Vitev, "The Little Bang" Particle/Theory colloquium, November 2004, Los Alamos National Laboratory, Los Alamos, NM
9. I. Vitev, "Parton energy loss in ultrarelativistic heavy ion collisions", Series of six lectures at the 14th Jyvaskyla Summer School in collaboration with the European Summer School, August 2004, Jyvaskyla, Finland
10. I. Vitev, "The Little Bang" Departmental colloquium, December 2003, Rutgers University, Piscataway, NJ

A. Conferences and major international workshops

1. I. Vitev, "Next-to-leading order calculation of the p_T weighted Sivers asymmetry in SIDIS", Invited talk at 2012 QCD Evolution workshop, JLab, VA May 2012.
2. I. Vitev, "Hadron, photon and jet production at the LHC", Invited talk at the High p_T at the LHC international workshop, CCNU, Wuhan, China, October 2012.
3. I. Vitev, "Jet quenching", Invited talk at the QCD Structure I international symposium, CCNU, Wuhan, China, October 2012.
4. I. Vitev, "Electroweak boson-tagged jet event asymmetries at the LHC", Invited jet physics talk, Quark Matter 2012 international conference, Washington DC, August 2012
5. I. Vitev, "Jet probes of QCD matter", Invited theoretical developments talk, Quark Matter 2012 international conference, Washington DC, August 2012
6. I. Vitev, High transverse momentum quarkonium production and dissociation in heavy ion collisions, Invited theory talk at the Winter Workshop on Nuclear Dynamics, Puerto Rico, April 2012.
7. I. Vitev, The Z-tagged hjet event asymmetry at the LHC, Invited theory talk at the Winter Workshop on Nuclear Dynamics, Puerto Rico, April 2012.
8. "Quarkonium production at RHIC and LHC, I. Vitev, Invited theory talk, Workshop on heavy flavor production in high-energy nuclear collisions, Chicago, IL, June 2012.
9. I. Vitev, Formation time of hadronic resonances, I. Vitev, Invited theory talk at the Resonance Workshop, Austin, TX, April 2012.
10. I. Vitev, "The Energy Frontier, Heavy Ions at the LHC", Invited overview talk at the QCD workshop, APS Division of Nuclear Physics Meeting, October 2011, East Lansing, MI

11. I. Vitev, "Next-to-leading order analysis of inclusive jet, tagged jet and di-jet production in Pb+Pb collisions at the LHC", Invited overview talk at the international conference Quark Matter 2011, May 2011, Annacy, France
12. I. Vitev, "Jet theory in heavy ion reactions at the LHC", Invited theory overview talk at HPHD Quark Matter 2011 satellite workshop Palaiseau, France
13. I. Vitev, "A lightcone wavefunction approach to heavy meson dynamics in the QGP", Invited talk at the international workshop Heavy Quark Production in Heavy Ion Collisions, January 2011, Purdue, IN
14. I. Vitev, "QCD intersections of particle and nuclear physics at the high energy frontier", Invited plenary talk at 2010 DNP fall meeting, November 2010, Santa Fe, NM
15. I. Vitev, "Jet physics in heavy ion collisions", Invited plenary talk at High energy strong interactions symposium, August 2010, YITP, Kyoto, Japan
16. I. Vitev, "The physics of inclusive and tagged jets in heavy ion collisions", Invited talk Jet week at INT, June 2010, INT, Seattle, WA
17. I. Vitev, "Nuclear Many-Body Physics at High Energies: from Fixed Target Experiments to the EIC", Invited talk at EIC Workshop, April 2010, ANL, Argonne, IL
18. I. Vitev, "Jet Physics with Relativistic Heavy Ions at RHIC and the LHC", Invited plenary talk at STAR collaboration meeting, January 2010, UT Austin, Austin, TX
19. I. Vitev, "Jets in Nuclear Collisions", Invited plenary talk at High Energy in the LHC era conference, January 2010, Santa Maria University, Valparaíso, Chile
20. I. Vitev, "A lightcone wavefunction approach to open heavy flavor dynamics in the QGP", Invited talk at Division of Particles the Fall APS/DNP 2009 meeting, Waikoloa, October 2009, Waikoloa, HI
21. I. Vitev, "Jet Physics in Relativistic Nuclear Collisions", Invited talk at Division of Particles and Fields, DPF 2009, Wayne State University, July 2009, Detroit, MI
22. I. Vitev, "Heavy Ion Physics with CMS", Invited talk at the CMS LHC Workshop 2009, April 2009, Santa Fe, NM
23. I. Vitev (presented by B.W. Zhang), "Jet Shapes and Jet Cross Sections: from Hadrons to Nuclei", Invited talk at Quark Matter 2009, March 2009, Knoxville, TN
24. I. Vitev, "Jet Shapes and Jet Cross Sections: from Hadrons to Nuclei", Invited talk at the XXV Winter Workshop on Nuclear Dynamics, January 2009, Big Sky, MO
25. I. Vitev, "A Light-Front Wave-Function Approach to In-Medium Modification of Heavy-Quark Fragmentation Functions", Invited talk at Heavy Quark Physics in Nucleus-Nucleus Collisions 2009, January 2009, UCLA, Los Angeles, CA

26. I. Vitev, "Novel mechanisms of heavy flavor suppression in the QGP", Invited talk at the international conference Hot Quarks 2008, August 2008, Estes Park, CO
27. I. Vitev, "Novel mechanisms of heavy flavor suppression in the QGP", Invited plenary talk at the international workshop Heavy Flavor in Heavy Ion Collisions, May 2008, Heidelberg, Germany
28. I. Vitev, "Tomography of jets: new opportunities at the LHC", Invited plenary talk at the international workshop Hot and Dense Matter in the RHIC-LHC Era, February 2008, Tata Institute for Fundamental Research, Mumbai, India
29. I. Vitev, "Theoretical developments in heavy and light flavour energy loss", Invited plenary talk at the Quark Matter 2008 international conference, February 2008, Jaipur, India
30. I. Vitev, "RHIC II physics overview", Invited plenary talk at the international 2007 RHIC & AGS Users Meeting From Solid Gold to Perfect Liquid, June 2007, Brookhaven National Laboratory, Upton, NY
31. I. Vitev, "Collisional dissociation of heavy mesons in the QGP Invited talk at the international 2007 RHIC & AGS Users Meeting section Heavy Flavor and Quarkonia Production, June 2007, Brookhaven National Laboratory, Upton, NY
32. I. Vitev, "Predictions for the LHC: from photons to heavy quarks", Invited plenary talk at Last Call for LHC Predictions international workshop, May 2007, Geneva, Switzerland
33. I. Vitev, "Self-consistency of jet quenching calculations at the LHC", Invited talk at High pT at the LHC international workshop, March 2007, Jyväskylä, Finland
34. I. Vitev, "Future prospects for PQCD at high temperature", Invited topical talk at US Nuclear Science long range planning QCD workshop, December 2006, Washington, DC
35. I. Vitev, "Heavy quark modification in a combined transport+quenching approach", Invited talk at the Quark Matter 2006 international conference, November 2006, Shanghai, China
36. I. Vitev, "Open charm and bottom production and suppression in dense matter", Invited plenary talk at the Selected Topics on Heavy Flavor Production in High-Energy Collisions international conference, November 2006, Beijing, China
37. I. Vitev, "Theory overview of QGP and cold nuclear matter effects at RHIC", Invited plenary talk at GHP 2006 Workshop, DNP fall meeting of the APS, October 2006, Nashville, TN
38. I. Vitev, "Open charm tomography of cold nuclear matter", Invited plenary talk at ISMD 2006 international conference, September 2006, Paraty, Brazil

39. I. Vitev, "Open questions in jet quenching theory", Invited talk at the QCD workshop EIC and Hot QCD 2006, RHICII planning meeting, July 2006, Brookhaven National Laboratory, Upton, NY
40. I. Vitev, "Recent results from and future directions for the theory of jet interactions with matter", Invited talk at the AGS and RHIC 2006 Annual Users Meeting, planning meeting, June 2006, Brookhaven National Laboratory Upton, NY
41. I. Vitev, "PQCD approach to parton propagation in matter", Invited plenary talk at the Hard Probes 2006 international conference, June 2006, Asilomar Conference Grounds, CA
42. I. Vitev, "Perturbative calculations of heavy quark production", Invited plenary talk at the Strangeness in quark matter 2006 international conference, March 2006, Los Angeles, CA
43. I. Vitev, "QCD EoS and jet tomography", Invited talk at the Modeling the QCD equation of state at RHIC workshop February 2006, Livermore, CA
44. I. Vitev, "Jet quenching", Invited talk at the LHC Workshop PANIC 2005 international conference October 2005, Santa Fe, NM
45. I. Vitev, "Parton energy loss and its application to hadronic reactions", Invited talk at the 2005 Annual AGS and RHIC Users Meeting international workshop, June 2005, Brookhaven National Laboratory, Upton, NY
46. I. Vitev, "Forward physics, power corrections and correlations", Invited talk at the international -Workshop, June 2005, Santa Fe, NM
47. I. Vitev, "Large angle hadron correlations from medium-induced gluon radiation", Invited talk at the Correlations and fluctuations 2005 international workshop, April 2005, Massachusetts Institute of Technology, Cambridge, MA
48. I. Vitev, "Large angle hadron correlations from medium-induced gluon radiation", Invited talk at the Jet Correlations at RHIC international workshop, March 2005, Brookhaven National Laboratory, Upton, NY
49. I. Vitev, "Power corrections to structure functions", Invited talk at the DIS 2005 XIII International Workshop on Deeply Inelastic Scattering, April 2005, Madison, WI
50. I. Vitev, "Large Angle Hadron Correlations from Medium-Induced Gluon Radiation", Invited talk at the Jet Correlations at RHIC international workshop, March 2005, Brookhaven National Laboratory, Upton, NY
51. I. Vitev, "Jet Quenching in Relativistic Heavy Ion Reactions", Invited plenary talk at the Physics and Astrophysics of the Quark Gluon Plasma, ICPAQGP05 international conference, February 2005, Calcutta, India

52. I. Vitev, "Generation of dynamical parton mass via coherent multiple scattering", Invited plenary talk at the CINPP05 international conference, February 2005, Calcutta, India
53. I. Vitev, "Probing the phases of QCD in ultrarelativistic nuclear collisions", Introductory talk to the heavy ion session, meeting of the American Physical Society, Division of Particles and Fields, August 2004, Riverside, CA
54. I. Vitev, "Jets in nuclear collisions", Invited talk at the 34th International Symposium on Multiparticle Dynamics July 2004, Rhonet Park, CA
55. I. Vitev, "The perturbative QCD factorization approach in high energy nuclear collisions", Invited talk at the Hot Quarks 04 international workshop for young scientists, July 2004, Taos Ski Valley, NM
56. I. Vitev, "Jets in nuclear collisions", Invited talk at the 2004 Gordon Research Conference on Nuclear Chemistry, June 2004, Colby-Sawyer College, New London, NH
57. I. Vitev, "Resummed QCD power corrections and dihadron correlations", Invited talk at the 2004 Annual AGS & RHIC Users Meeting, Workshop program, May 2004, Brookhaven National Laboratory, Upton, NY
58. I. Vitev, "High p_T spectra at RHIC and QGP", Invited talk at the 2004 Annual AGS & RHIC Users Meeting, Workshop program, May 2004, Brookhaven National Laboratory, Upton, NY
59. I. Vitev, "Jet Tomography", Invited plenary talk at the Quark Matter04 international conference, January 2004, Oakland, CA
60. I. Vitev, "Separating process-dependent and process-independent dynamics at RHIC", High- p_T at RHIC international workshop, December 2003, Brookhaven National Laboratory, Upton, NY
61. I. Vitev, "Jet tomography of heavy ion reactions and the QGP paradigm at RHIC", American Physical Society meeting, Division of Nuclear Physics, October 2003, University of Arizona, Tucson, AZ
62. I. Vitev, "D+Au and Au+Au reactions at RHIC: manifestation of multiparton dynamics in dense nuclear matter", First three years at RHIC international program, May 2003 -June 2003, Institute for Nuclear Theory, Seattle, WA
63. I. Vitev, "Au+Au and d+Au reactions at RHIC: Theory on a positive note", International Conference on the Intersections between Particle and Nuclear Physics CIPANP03, May 2003, New York University, New York, NY
64. I. Vitev, "What can we learn from the d+Au run at RHIC?", Transverse dynamics at RHIC international workshop, May 2003, Brookhaven National Laboratory, Upton, NY

65. I. Vitev, "How to determine medium modifications by comparing p+p, p+A and A+A", Hard probes at the LHC international collaboration meeting, October 2002, CERN, Geneva, Switzerland
66. I. Vitev, "High-pT pion quenching versus anti-baryon enhancement in nucleus-nucleus collisions", Quark Matter02 international conference, July 2002, Nantes, France
67. I. Vitev, "Jet energy loss in hot and dense matter", International conference on Heavy Ion Physics Budapest02, March 2002, Budapest, Hungary
68. I. Vitev, "Suppression of particle spectra in ultra-relativistic heavy ion reactions from RHIC to LHC", International CMS Heavy Ion workshop, February 2002, Massachusetts Institute of Technology, Cambridge, MA
69. I. Vitev, "Interplay of jet quenching and baryon junction physics at RHIC", High-pT phenomena at RHIC international workshop, November 2001, Brookhaven National Laboratory, Upton, NY
70. I. Vitev, "High-pT spectra at RHIC (Theory)", Hard Probes at the LHC international collaboration workshop, October 2001, CERN, Geneva, Switzerland
71. I. Vitev, "Anomalous anti-proton to negative pion ratio as revealed by jet quenching at RHIC", International Nuclear Physics Conference INPC01, August 2001, Berkeley, CA
72. I. Vitev, "The role of jet quenching in the p₀ anomaly at RHIC", International European Physical Society High Energy Physics conference EPS HEP2001, July 2001, Budapest, Hungary
73. I. Vitev, "Two facets of parton energy loss: spectra and v₂", RHIC -Institute of Nuclear Theory international workshop, May 2001, Lawrence Berkeley National Laboratory, Berkeley, CA
74. I. Vitev, "In Last call for RHIC predictions", Quark Matter99 international conference, May 1999, Torino, Italy,
75. I. Vitev, "A model of the electroweak interactions without Higgs particle", II-nd international workshop New Trends in Quantum Field Theory August 1995, Razlog, Bulgaria

C. Seminars

1. I.Vitev, "The physics of jets in heavy ion reactions ," Invited seminar at UC Boulder, Boulder, CO May 2012.
2. I. Vitev, "Jet physics in heavy ion reactions at RHIC and at the LHC", Nuclear Theory seminar, TRIUMF, September 2011, Vancouver, British Columbia, Canada
3. I. Vitev, "Jet physics in heavy ion reactions at RHIC and at the LHC", Nuclear Theory seminar, Brookhaven National Laboratory, July 2011, Upton, NY

4. I. Vitev, "The physics of Z0 tagged jets: an emphasis on heavy ion physic", P25 Seminar, September 2010, LANL, Los Alamos, NM
5. I. Vitev, "Hard probes physics at RHIC and the LHC: from jets to heavy quarks", Theory seminar at UCLA, April 2009, Los Angeles, CA
6. I. Vitev, "Jet Shapes and Jet Cross Sections: from Hadrons to Nuclei", Nuclear Theory seminar, Brookhaven National Lab., January 2009, Upton, NY
7. I. Vitev, "Partonic energy loss explained", Theoretical subatomic physics seminar P-25, May 2008, Los Alamos National Laboratory, Los Alamos, NM
8. I. Vitev, "Theoretical developments in heavy and light avour energy loss", Theoretical nuclear physics seminar T-16, January 2008, Los Alamos National Laboratory, Los Alamos, NM
9. I. Vitev, "Jet physics in the LHC era", Nuclear and particle physics seminar, January 2008, University of New Mexico, Albuquerque, NM
10. I. Vitev, "The physics of light quarks, heavy quarks and jets in heavy ion collisions", Nuclear theory seminar, December 2007, Kent State University, Kent, OH
11. I. Vitev, "The physics of light quarks, heavy quarks and jets in heavy ion collisions", Particle and Nuclear theory seminar, November 2007, Wayne State University, Detroit, MI
12. I. Vitev, "The physics of light quarks, heavy quarks and jets in heavy ion collisions", Particle and Nuclear theory seminar, October 2007, University of Texas at Austin, Austin, TX
13. I. Vitev, "Jet physics at the LHC", Theoretical subatomic physics seminar P-25, August 2007, Los Alamos National Laboratory, Los Alamos, NM
14. I. Vitev, "The rst precise determination of quark energy loss in nuclei", Nuclear theory seminar, April 2007, Rutgers University, Piscataway, NJ
15. I. Vitev, "Collisional dissociation of heavy mesons in dense QCD matter", Nuclear theory seminar, March 2007, Los Alamos National Laboratory, Los Alamos, NM
16. I. Vitev, "The rst precise determination of quark energy loss in nuclei", Nuclear and Particle theory seminar, March 2007, Los Alamos National Laboratory, Los Alamos, NM
17. I. Vitev, "Parton propagation in cold nuclear matter", Nuclear theory seminar, September 2006, Columbia University, New York, NY
18. I. Vitev, "Recent PQCD results in heavy quark production", LDRD DR seminar, July 2006, Los Alamos National Laboratory, Los Alamos, NM

19. I. Vitev, "Applications of perturbative QCD to relativistic heavy ions", High energy-Nuclear theory seminar, April 2006, Penn State University, State College, PA
20. I. Vitev, "Power corrections to hadronic processes", Theory seminar, November 2005, Southern Methodist University, Dallas, TX
21. I. Vitev, "Quark and gluon dynamics in cold nuclear matter Nuclear theory seminar", T-16, November 2005, Los Alamos National Laboratory, Los Alamos, NM
22. I. Vitev, "Heavy quark energy loss, status and perspectives", Heavy quark LDRD seminar, P-25, November 2005, Los Alamos National Laboratory, Los Alamos, NM
23. I. Vitev, "Parton suppression at RHIC", Nuclear and particle physics seminar, October 2005, Los Alamos National Laboratory, Los Alamos, NM
24. I. Vitev, "Theory of ultrarelativistic heavy ion collisions", Theory seminar, August 2005, Bulgarian Academy of Sciences, Institute of Atomic and Nuclear Physics, Sofia, Bulgaria
25. I. Vitev, "Nuclear shadowing in QCD relevant to neutrino experiments at Fermilab", Nuclear theory seminar, March 2005, Rutgers University, Piscataway, NY
26. I. Vitev, "Large angle hadron correlations from medium-induced gluon radiation", Nuclear theory seminar, February 2005, SUNY at Stony Brook, Stony Brook, NY
27. I. Vitev, "QCD from QED and college physics", Particle and nuclear theory seminar, December 2004, Theory Division, Los Alamos National Laboratory, Los Alamos, NM
28. I. Vitev, "Resummed QCD power corrections to nuclear shadowing", Nuclear theory seminar, May 2004, Columbia University, New York, NY
29. I. Vitev, "Resummed QCD power corrections in p+A collisions", Nuclear theory seminar, April 2004, Iowa State University, Ames, IA
30. I. Vitev, "Nuclear shadowing and higher twist", Particle and nuclear theory seminar, March 2004, Physics Division, Los Alamos National Laboratory, Los Alamos, NM
31. I. Vitev, "Recent developments in jet tomography", Nuclear theory seminar, February 2004, Texas A&M University and the Cyclotron Institute, College Station, TX
32. I. Vitev, "Shadowing and higher twist", Theory seminar, December 2003, C.-N. Yang Institute of Theoretical Physics, SUNY at Stony Brook, Stony Brook, NY
33. I. Vitev, "Hadron production and attenuation at forward rapidities", PHENIX small-x workshop, November 2003, University of Illinois, Urbana Champaign, IL
34. I. Vitev, "Resummed QCD power corrections to nuclear shadowing", CTEQ collaboration meeting, October 2003, Michigan State University, East Lansing, MI

35. I. Vitev, "Resummed QCD power corrections to nuclear shadowing", Nuclear theory seminar, October 2003, University of Colorado, Boulder, CO
36. I. Vitev, "Resummed QCD power corrections to nuclear shadowing", Nuclear theory seminar, September 2003, Iowa State University, Ames, IA
37. I. Vitev, "D+Au and Au+Au reactions at RHIC: manifestation of multiparton dynamics in dense nuclear matter", RIKEN lunch seminar, May 2003, Brookhaven National Laboratory, Upton, NY
38. I. Vitev, "Au+Au and d+Au reactions at RHIC: Theory and perspectives", AGS and RHIC annual users meeting, May 2003, Brookhaven National Laboratory, Upton, NY
39. I. Vitev, "Multiparton tomography of cold and hot nuclear matter", Nuclear theory seminar, April 2003, Ohio State University, Columbus, OH
40. I. Vitev, "Multiparton tomography of cold and hot nuclear matter", Nuclear theory seminar, April 2003, Kent State University, Kent, OH
41. I. Vitev, "Impact parameter, rapidity and flavor dependence of the Cronin effect at RHIC", Heavy ion tea seminar, February 2003, Lawrence Berkeley National Laboratory, Berkeley, CA
42. I. Vitev, "Impact parameter, rapidity and flavor dependence of the Cronin effect at RHIC", Nuclear theory seminar, February 2003, Los Alamos National Laboratory, Los Alamos, NM
43. I. Vitev, "Jet quenching in thin plasmas -the predictions before the experiment", First two years at RHIC workshop, December 2002, Institute of Nuclear Theory, Seattle, WA
44. I. Vitev, "High-pT tomography of d+Au and Au+Au at SPS, RHIC and LHC", Nuclear theory seminar, November 2002, Michigan State University, East Lansing, MI
45. I. Vitev, "High-pT tomography of d+Au and Au+Au at SPS, RHIC and LHC", Midwest theory get together, October 2002, Argonne National Laboratory, Argonne, IL
46. I. Vitev, "High-pT tomography of d+Au and Au+Au at SPS, RHIC and LHC", Nuclear theory seminar, October 2002, Iowa State University, Ames, IA
47. I. Vitev, "Hadronic observables of pQCD multi-parton dynamics in hot and dense matter", Nuclear theory seminar, February 2002, Duke University, Durham, NC
48. I. Vitev, "Hadronic observables of pQCD multi-parton dynamics in hot and dense matter", Nuclear theory seminar, February 2002, Lawrence Berkeley National Laboratory, Berkeley, CA
49. I. Vitev, "Hadronic observables of pQCD multi-parton dynamics in hot and dense matter" Nuclear theory seminar, February 2002, Michigan State University, E. Lansing, MI

50. I. Vitev, “Reaction operator approach to non-Abelian energy loss and its phenomenological applications”, Nuclear theory seminar, December 2001, Iowa State University, Ames, IA
51. I. Vitev, “Jet quenching and event generators”, Oscar II workshop, July 1999, Brookhaven National Laboratory, Upton, NY
52. I. Vitev, “The Standard Model and a three-fold covering of $U(2)$ ”, Particle Theory Seminar, June 1995, Soa University, Bulgaria

D. Posters and presentations

1. I. Vitev, “GLV approach and next-to-leading order Calculations”, Jet Collaboration meeting, June 2010, Lawrence Berkeley National Laboratory, Berkeley, CA
2. I. Vitev, “Let physics at the LHC”, LDRD ER committee presentation, May 2010, Los Alamos National Laboratory, Los Alamos, NM
3. I. Vitev, “Nuclear Theory Overview”, NPAC Capability Review, April 2010, Los Alamos National Laboratory, Los Alamos, NM
4. I. Vitev, “Nuclear Theory at LANL”, DOE Nuclear Theory Review, September 2009, Washington, DC
5. I. Vitev, “The rst precise determination of energy loss in nuclei”, LDRD ER poster day, September 2008, Pojoque, NM
6. I. Vitev, “Heavy ion science at the LHC Beyond the Standard Model”, LDRD Review, June 2008, Los Alamos National Laboratory, Los Alamos, NM
7. I. Vitev, “The rst precise determination of energy loss in nuclei”, E906 collaboration meeting, June 2008, Fermi National Accelerator Laboratory Batavia, IL
8. I. Vitev, “Searching for chiral symmetry restoration with hadronic resonances”, Nuclear theory and experiment presentation, June 2008, University of Texas at Austin, Austin, TX
9. I. Vitev, “Spin physics in RHIC polarized p+p collisions”, High energy physics and nuclear theory discussion, January 2008, University of New Mexico, Albuquerque, NM
10. I. Vitev, “The rst precise determination of quark energy loss in nuclei”, LDRD ER Review Committee June 2007, Los Alamos National Laboratory Los Alamos, NM
11. I. Vitev, “Quenching and ow of heavy quarks”, LDRD DR Heavy Quarks as Probes of a New State of Matter midterm review May 2007, Los Alamos National Laboratory, Los Alamos, NM
12. I. Vitev, “RHIC Theory”, Nuclear & Particle Physics Capability Review April 2007, Los Alamos National Laboratory, Los Alamos, NM

13. I. Vitev, “Dissociation of heavy mesons in dense matter”, Specialized LDRD DR presentation, December 2006, Los Alamos National Laboratory, Los Alamos, NM
14. I. Vitev, “Heavy ion theory and connections”, PDRC review committee February 2006, Los Alamos National Laboratory, Los Alamos, NM
15. I. Vitev, “Resummed QCD power corrections to open charm production” Quark Matter 2005 international conference, August 2005, Budapest, Hungary
16. I. Vitev, “Large angle hadron correlations from medium-induced gluon radiation”, Quark Matter 2005 international conference, August 2005, Budapest, Hungary
17. I. Vitev, “Nuclear theory at LANL” DOE review committee July 2005, DOE headquarters Germantown, MD
18. I. Vitev, “On the issue of nuclear modification in p+p, p+A and A+A collisions”, Informal discussion with the members of the PHENIX collaboration, July 2004, Los Alamos National Laboratory, Los Alamos, NM

Advisees:

- Zhongbo Kang, currently a J. Robert Oppenheimer Fellow at LANL
- Grigory Ovanessian, currently a postdoctoral research associate at LANL
- Bryon Neufeld, currently a Research Scientist at EMA
- Rishi Sharma, currently an Assistant Professor at TIFR
- Ben-Wei Zhang, currently a Professor, Associate Director at Central China Normal University
- Hongxi Xing, to join as a postdoctoral research associate at LANL
- Yang-Ting Chien, to join as a postdoctoral research associate at LANL